DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026990
Date Inspected: 06-Jan-2012

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Jobsite

CWI Name:	As noted below			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: SAS OBG

Summary of Items Observed:

Quality Assurance Inspector (QA) Douglas Frey was at the American Bridge/Fluor (ABF) job site at Yerba Buena Island in California between the times noted above in order to monitor Quality Control functions and the in process work being performed by ABF personnel. The following items were observed:

12E/PP111/E3 Lifting lug Hole W2 (Interior)

This QA Inspector randomly observed ABF qualified welder Salvador Sandoval (ID 2202) complete the cover pass on lifting lug hole W2 located at 12E/PP111/E3 on the interior of the OBG. This QA Inspector observed the welder perform the Shielded Metal Arc Welding (SMAW) process in the 4G overhead position and upon completion of the welding, a small disc grinder was utilized to blend the weld reinforcement to a near flush surface condition. During the in process welding this QA Inspector observed QC Inspector Fred Von Hoff monitor the welding and the parameters to insure the work was in compliance with ABF-WPS-D15-1110A-Revision 1. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

13W/14W/A4/A5 QC UT (Exterior)

This QA Inspector randomly observed QC Inspector Jesse Cayabyab perform Ultrasonic Testing (UT) on “A” deck splice A4 from y+3950 mm to A5 at y+1500mm. This QA Inspector verified the instrument through calibration and utilization. This QA Inspector observed the QC Inspector utilize a 70° wedge/transducer and noted scanning from both sides of the weld. This QA Inspector observed that Mr. Cayabyab found no rejectable

indications and the work appeared to be in general conformance with the contract specifications. This joint is a Seismic Performance Critical Member (SPCM).

13W/14W/A4/A5 QA UT (Exterior)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 25% of the welds at the locations listed above. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1. 5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications. This joint is a Seismic Performance Critical Member (SPCM).

FL3 East Face QA MT (Exterior)

This QA Inspector performed a Magnetic Particle (MT) Inspection of the temporary attachment sites of FL3 on the east face. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

12E/PP114/E4 Lifting Lug Holes W1 and W4 (Interior)

This QA Inspector randomly observed the in process welding of lifting lug holes W1 and W4 at 12E/PP114/E4. The SMAW process was performed by ABF welder Jorge Lopez (ID 6149) in the (4G) overhead position utilizing E7018-H4R electrodes with amperage of 136. This QA Inspector observed the QC Inspector measure inter-pass temperatures and monitor the welding to insure the parameters were in accordance with ABF-WPS-D15-1110A-Revision 1. This QA Inspector made periodic observations to monitor quality and noted that the work was completed on this date and appeared to be in general conformance with the contract specifications.

12W/13W/D2 Repair @ y+ 8200 mm (Exterior)

This QA Inspector randomly observed ABF welder Jeremy Dolman (Welder ID 5042) performing the repair welding operation of an ultrasonic rejectable indication as per the SMAW process in the (4G) overhead position at y+ 8200 mm on “D2” of 12W/13W. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify the preheat temperature and that the welding parameters (Amps=135) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

12W/13W/D2 Repair @ y+ 1710 mm (Exterior)

This QA Inspector randomly observed ABF welder Fred Kaddu (ID 2188) performing the repair welding operation of an excavation as per the SMAW process in the (4G) overhead position on “D2” at y+ 1710 mm on 12W/13W. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Sal Merino verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in

accordance with WPS D1.5–100- Repair. This QA Inspector made subsequent observations throughout the shift and noted that the work was in progress and appeared to be in general conformance with the contract documents.

12E/13E/D3 Repair (Exterior)

This QA Inspector randomly observed ABF welder James Zhen performing the back-gouge operation of ultrasonic rejectable indications on “D3” at 12E/13E located at "Y" 1890 mm: (30 mm wide; 320 mm length; and 25 mm in depth) “Y” 2160 mm: (30 mm wide; 260 mm length; and 25 mm in depth). This QA Inspector observed QC Inspector Fred Von Hoff perform a Magnetic Particle Inspection (MT) of the excavation to determine the soundness of the metal. Upon completion of the testing this QA Inspector verified that no rejectable indications were present.

This QA Inspector randomly observed ABF welder Wai Kit Lai (Welder ID 2953) performing the repair welding operation of two (2) ultrasonic rejectable indications as per the SMAW process in the (4G) overhead position on “D3” at 12E/13E. This QA Inspector observed the use of E7018-H4R electrodes and QC Inspector Fred Von Hoff verify that the preheat temperature was at the minimum of 10 degrees C and that the welding parameters (Amps=135) were in accordance with WPS D1.5–1001- Repair. The welding parameters observed at this location appeared to be in general compliance with approved WPS and the contract specifications.

12W/13W/A2 (Exterior)

This QA Inspector randomly observed ABF welding operator Richard Garcia (ID 5892) performing the Flux Core Arc Welding with gas (FCAW-G) process in the (4G) overhead position on “A2” in the interior of the OBG. This QA Inspector observed QC Inspector Sal Merino monitoring the welding to ensure the welding parameters were in compliance pertaining to ABF-WPS-D15-3110-4. The parameters were recorded as (A=251/V=23. 3/TS=262/HI=1.34). This QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work was completed on this date and appeared to be in general conformance to the contract requirements.

FW Spencer Pipe Welding South Shaft Tower (Exterior)

This QA Inspector observed F.W. Spencer welder Damian LLanos ID# 6645 performing Shielded Metal Arc Welding (SMAW) in the 2G horizontal position on domestic water and compressed air outlets located at the 124 m level of the south shaft of the tower. This QA Inspector verified the fit up of the joints and found it to be satisfactory. This QA Inspector observed QC Inspector Steve Jensen monitoring the welding to ensure the welding parameters were in compliance pertaining to WPS-1-12-1 Revision 2 (1.12). The welder was observed implementing E6010 electrodes in the root pass with the balance using E7018 electrodes. The QA inspector made subsequent observations throughout the shift to monitor quality and noted that the work listed below was completed on this date and appeared to be in general conformance with the contract documents.

1/T2/DW1/124
1/T2/CA2/124

6W/PP46.5/W2 Longitudinal Stiffeners MT (Interior)

This QA Inspector performed a Magnetic Particle (MT) Inspection of Longitudinal Stiffeners at 6W/PP46. 5/W2. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

6W/PP46.5/W2 Longitudinal Stiffeners UT (Interior)

This QA Inspector performed Ultrasonic Testing (UT) on approximately 10% of the welds at Longitudinal Stiffeners LS-E and LS-W. These welds were previously accepted by QC Ultrasonic technicians in accordance with AWS D1.5-2002, section 6, table 6.3. This QA observed no rejectable indications at the time of testing. This QA generated a TL-6027 UT report on this date. The completed work observed at this location appeared to be in compliance with the contract specifications.

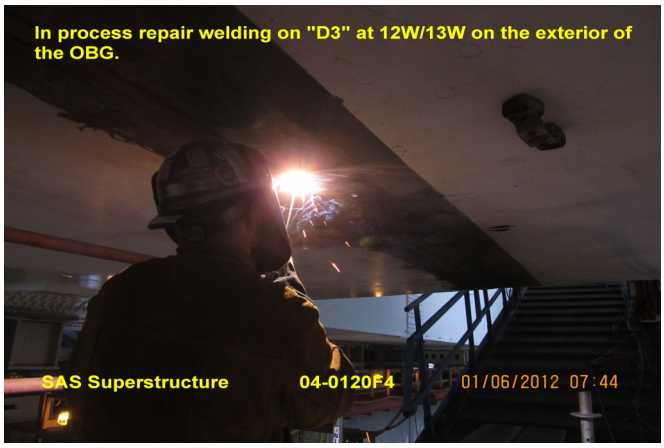
11W/12W/C1/C2 MT (Interior)

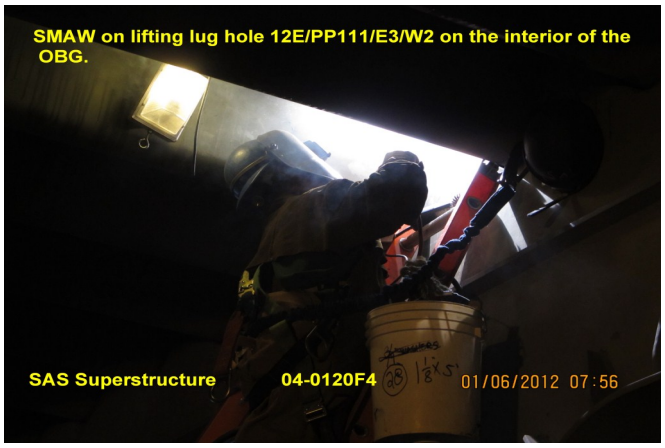
This QA Inspector performed a Magnetic Particle (MT) Inspection of side plate “C1/2” at 11W/12W on the interior of the OBG. This QA Inspector performed the yoke method in conformance with ASTM E 709 and the standard of acceptance with D1.5 section 6.26. This QA Inspector noted that no rejectable indications were found at the time of testing. This QA Inspector generated a TL-6028 MT report on this date. The completed work at this location appeared to be in general conformance with the contract specifications.

Note: The QAI reviewed the observations and inspection with QA Lead Inspector, Daniel Reyes, written in this report. The issues were noted by the QAI and the QA Lead Inspector concurs with the QA report.

Summary of Conversations:

The were no pertinent conversations to report.





Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910 , who represents the Office of Structural Materials for

your project.

Inspected By:	Frey,Doug	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer